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REMARKS

In the outstanding Office Action, the Examiner has rejected Claims 21-40. Claims 21, 26, and 30-34 have been amended, and Claims 41-44 have been added. No new matter has been added. Thus, Claims 21-44 are presented for further examination. Reconsideration and allowance of all Claims 21-44 in light of the present remarks is respectfully requested.

Discussion of Objections to the Drawings

The Examiner objected to the drawings, stating that "they should be provided with appropriate legends." Also, the Examiner objected to the drawings as failing to comply with 37 C.F.R. § 1.84 because they did not include reference numeral "100". Applicant has submitted herewith proposed corrections to the drawings.

Discussion of Claim Objections

The Examiner objected to Claim 21 because of an informality. Specifically, the word "recourse" has been amended to read "resource" to correct a typographical error in Claims 21, 32, and 34. Thus, Applicant respectfully requests the objection to Claim 21 be withdrawn.

Discussion of Rejections Under 35 U.S.C. § 112, ¶ 2

The Examiner has rejected Claims 26-27 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 26 has been amended according to the Examiner's suggestion. The amendment is for clarification and does not narrow the scope of the claim. Thus, Applicant respectfully requests the rejection of Claims 26-27 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Discussion of Rejections of Claims 30-31 Under 35 U.S.C. § 102(e)

The Examiner has rejected Claims 30-31 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 5,960,355 to Ekman, et al.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053.

Amended Claims 30 and 31 recite methods of transmitting radio resource signalling reports from a mobile station, "wherein the radio resource signalling reports are intended for use by a service node to allocate a radio resource to the mobile station".

Ekman describes a system and method for geographically positioning a first mobile radio terminal within a radio network. In particular, first and second radio terminals measure the relative receive times between the timing signals downlink received from at least three radio base stations, and the second fixed radio terminals send them to a service node in the network to calculate the transmission time offsets of the timing signals downlink. Calculating the position of the first mobile radio terminal can be performed in the service node, where the mobile radio terminal performs signal strength measurements associated with scanning a specified set of frequencies and reports the results via an SMS message to the service node.

Ekman, however, does not teach or suggest a method of transmitting radio resource signalling reports from a mobile station, "wherein the radio resource signalling reports are intended for use by a service node to allocate a radio resource to the mobile station".

Therefore, as Ekman fails to describe each and every element as set forth in each of Claims 30 and 31, either explicitly or inherently, Applicant respectfully submits Claims 30 and 31 for further review as patentable subject matter.

Discussion of Rejections of Claims 33, 36 and 38 Under 35 U.S.C. § 102(b)

The Examiner has rejected Claims 33, 36 and 38 under 35 U.S.C. § 102(b) as being anticipated by WIPO Publication No. WO 95/17076 to Luijten, et al.

In rejecting Claim 33, the Examiner stated that "Luijten discloses a cellular communication system comprising a plurality of base stations (1, 3) adapted to conducting communications with mobile stations 2 via a radio interface, and a service node 4 adapted to receive radio resource signalling reports generated by mobile stations when in connected mode in the system, the system being arranged to route the reports from the plurality of base stations to the service nodes (see page 19, line 14 to page 20, line 20)."

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053.

The cellular communications system of amended Claim 33 comprises “a plurality of base stations adapted to conducting communications with mobile stations via a radio interface; and a service node adapted to receive radio resource signalling reports generated by mobile stations when in connected mode in the system, wherein the radio resource signalling reports are intended for use by a service node to allocate a radio resource to the mobile station, and wherein the system is arranged to route the reports from the plurality of base stations to the service node.”

In this way, aspects of the invention allow radio resources to be allocated by the serving base station when appropriate, while also allowing radio resources to be allocated by a service node higher in the network hierarchy in other circumstances. This allows additional parameters not available to the base station to be taken into account when allocating radio resources in these other circumstances.

Luijten describes a mobile telecommunication system comprising a processor for processing signaling messages, a plurality of base stations coupled to the processor device, and at least one mobile terminal in communication with a base station. Signaling messages from the mobile station destined for the processor are provided with a first destination code, and signaling messages destined for the base station are provided with a second destination code, such that the signaling messages provided with the first destination code are able to pass through the base station transparently and without extensive analysis en route to the processor.

Luijten also describes a prior art system wherein signaling messages which have to be processed in the processor device (relates to an MSC) are, for example, a call set-up message and a location update message, in contrast to signaling messages which are processed in the base station, such as, for example, a resource management message. *Luijten at page 1, lines 17-20*. There is no suggestion that this aspect of the prior art system is modified in the system described by Luijten. Therefore, Luijten’s “radio resource signaling report” is not processed in the processor device or service node.

More particularly, in response to detection of a weak radio link at a current base station (1) and a stronger radio link at a second base station (3), the mobile terminal transmits a first adjustment message to base station (1) and a second adjustment message via base station (1) to

processor device (4). The adjustment message comprises the destination code of the old base station (base station 1) and the destination code of the new base station (base station 3). *Page 18, lines 18-23*. Thus, the processor device (4) is informed of the fact that all the signaling messages should be transmitted to the mobile terminal via base station (3) from then on. *Page 20, lines 1-3*.

Thus, the processor device of Luijten simply receives a report that the mobile station is now communicating with a new base station. More specifically, the radio resource (base station) for the mobile station is first allocated to the mobile station, and the new allocation is subsequently reported to the processing device. Nowhere does Luijten describe a system wherein "the radio resource signalling reports are intended for use by a service node to allocate a radio resource to [a] mobile station", as recited in Claim 33.

Therefore, as the prior art of record fails to describe, either explicitly or inherently, all of the elements as recited in amended Claim 33, Applicant respectfully submits Claim 33 for further review as patentable subject matter.

Because Claims 34-40 depend from Claim 33, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

In regard to Claim 38, the Examiner stated that "Luijten discloses that the base stations are adapted to select radio resources to be allocated to the mobile stations on the basis of radio measurement reports received from the mobile stations", and in regard to Claim 36, the Examiner asserted that Luijten also teaches that "the service node is adapted to select radio access nodes to be allocated to the mobile stations on the basis of the reports". *O.A. at page 4, para's 4 and 5*. However, the Examiner later states with respect to Claim 21 that "Luijten thus discloses all the claimed limitations except for transmitting radio measurement reports intended for use by the serving base station 1". *O.A. at page 6, para. 1*.

As previously discussed, there is no indication in Luijten that the processor is adapted to "select radio access nodes to be allocated to the mobile stations" on the basis of reports as recited in Claim 36. In contrast, Luijten only discloses that the base station processes a resource management message. Thus, the Examiner cannot argue that Luijten teaches the elements as

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recited in both Claims 36 and 38, as he (correctly) stated that Luijten doesn't teach transmitting radio measurement reports intended for use by the base station, as recited in Claim 38.

Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 21, 23, and 32 under 35 U.S.C. § 103(a) as being unpatentable over Luijten in view of U.S. Patent No. 5,682,416 to Schmidt, et al.

In rejecting Claim 21, the Examiner asserted that "Luijten discloses a method of transmitting signalling reports from a mobile station 2 to a serving base station 1 in a cellular communications system comprising a network infrastructure (see numeral 4) and a plurality of base stations (see base station 3) connected thereto, the method comprising the mobile station 2 transmitting a radio resource signalling report (see first adjustment message on page 19 lines 14-22) intended for use by the serving base station 1 to allocate a radio resource to the mobile station, and transmitting a radio resource signalling report (see the second adjustment message on page 19 lines 14-22) intended for use by the service node 4 to allocate a radio resource to the mobile station (see page 3 lines 1-24, page 12 lines 17-24, page 19 line 14 to page 20 line 20)." *O.A. at page 5, para. 4 through page 6, para. 1* (emphasis added). The Examiner further stated that "Luijten thus discloses all the claimed limitations except for transmitting radio measurement reports intended for use by the serving base station 1 as recited in the claim." *O.A. at page 6, para. 1*. However, the Examiner had just previously stated that Luijten does teach such a limitation and it is therefore unclear why the Examiner has cited Schmidt for teaching "transmitting radio measurement reports intended for use by the serving base station to allocate radio resource to the mobile station". *Id.*

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580.

Claim 21 recites a method of transmitting signalling reports from a mobile station to a serving base station in a cellular communications system, comprising "transmitting radio measurement reports intended for use by the serving base station to allocate a radio resource to the mobile station; and transmitting a radio resource signalling report intended for use by a service node in the network infrastructure to allocate a radio resource to the mobile station."

In contrast to the Examiner's assertions, Luijten in no way teaches "transmitting a radio resource signalling report intended for use by a service node in the network infrastructure to

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allocate a radio resource to the mobile station”, as recited in Claim 21. As discussed above with respect to Claim 33, following a handover procedure the processor device of Luijten simply receives a report (adjustment message) that the mobile station is now communicating with a new base station. More specifically, the radio resource (base station) for the mobile station is first allocated to the mobile station, and the new allocation is subsequently reported to the processing device via the second adjustment message.

Thus, as Luijten, either alone or in combination with Schmidt, fails to teach or suggest every element as recited in Claim 21, Applicant respectfully submits Claim 21 for further review as patentable subject matter.

Consequently, because they incorporate all of the limitations of the claim from which they depend, and because they have additional features, Claims 22-29 also define patentable subject matter for at least the same reasons as set forth above with respect to the independent claim.

The mobile station for a cellular communications system of Claim 32 comprises “a transmitter configured to transmit radio measurement reports intended for use by a serving base station to allocate a radio resource to the mobile station, and to transmit a radio resource signalling report intended for use by a service node in a network infrastructure to allocate a radio resource to the mobile station.”

As discussed above with respect to Claims 21 and 33, Luijten fails to teach a transmitter configured to “transmit a radio resource signalling report intended for use by a service node in a network infrastructure to allocate a radio resource to the mobile station.”

Therefore, as neither Luijten nor Schmidt teach or suggest all of the elements as recited in Claim 32, Applicant respectfully submits Claim 32 for further review as patentable subject matter.

New Claim

Applicant respectfully submits that the prior art of record fails to teach or suggest a cellular communications system “wherein the service node stores data comprising at least one of a radio link quality, a list of target radio access nodes, personal subscriber profile and service information, and operational parameter criteria, and wherein the service node uses the data to allocate a radio resource to the mobile station”, as recited in new Claim 41. New Claims 43 and

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44 recite limitations similar to those recited in new Claim 41. Support for these claims is found at page 8, line 15 through page 9, line 15 of the specification.

Support for this Claim 42 is found at page 11, lines 11-21 of the specification.

Therefore, Applicant respectfully submits that new Claims 41-44 are in condition for allowance.

The applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, certain amendments to the claims for patentability purposes pursuant to statutory sections 102, 103 and/or 112, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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